```
SQL> cl scr

SQL> --WHERE ROWNUM = 1 --Successful
SQL> --WHERE ROWNUM = 4 --Not Successful
SQL> --WHERE ROWNUM < 4 --Successful
SQL> --WHERE ROWNUM > 4 --NOt Successful
SQL> SELECT ROWNUM, Ename, Sal
  2  FROM Emp;

    ROWNUM ENAME              SAL
---------- ---------- ----------
         1 KING             5000
         2 BLAKE            2850
         3 CLARK            2450
         4 JONES            2975
         5 MARTIN           1250
         6 ALLEN            1600
         7 TURNER           1500
         8 JAMES             950
         9 WARD             1250
        10 FORD             3000
        11 SMITH             800
        12 SCOTT            3000
        13 ADAMS            1100
        14 MILLER           1300

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Ename, Sal
  2  FROM Emp
  3* WHERE Deptno = 10
SQL> /

    ROWNUM ENAME              SAL
---------- ---------- ----------
         1 KING             5000
         2 CLARK            2450
         3 MILLER           1300

SQL> ED
Wrote file afiedt.buf
```

```
  1   SELECT ROWNUM, Ename, Sal
  2   FROM Emp
  3*  WHERE Deptno = 30
SQL> /

    ROWNUM ENAME            SAL
---------- ---------- ----------
         1 BLAKE           2850
         2 MARTIN          1250
         3 ALLEN           1600
         4 TURNER          1500
         5 JAMES            950
         6 WARD            1250

6 rows selected.

SQL> cl scr

SQL> ED
Wrote file afiedt.buf

  1   SELECT ROWNUM, Ename, Sal
  2   FROM Emp
  3*  ORDER BY Sal
SQL> /

    ROWNUM ENAME            SAL
---------- ---------- ----------
        11 SMITH            800
         8 JAMES            950
        13 ADAMS           1100
         9 WARD            1250
         5 MARTIN          1250
        14 MILLER          1300
         7 TURNER          1500
         6 ALLEN           1600
         3 CLARK           2450
         2 BLAKE           2850
         4 JONES           2975
        10 FORD            3000
        12 SCOTT           3000
         1 KING            5000
```

```
14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Ename, Sal
  2  FROM Emp
  3* ORDER BY ROWNUM
SQL> /

    ROWNUM ENAME             SAL
---------- ---------- ----------
         1 KING             5000
         2 BLAKE            2850
         3 CLARK            2450
         4 JONES            2975
         5 MARTIN           1250
         6 ALLEN            1600
         7 TURNER           1500
         8 JAMES             950
         9 WARD             1250
        10 FORD             3000
        11 SMITH             800
        12 SCOTT            3000
        13 ADAMS            1100
        14 MILLER           1300

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1  SELECT ROWNUM, Ename, Sal
  2  FROM Emp
  3* ORDER BY ROWNUM DESC
SQL> /

    ROWNUM ENAME             SAL
---------- ---------- ----------
        14 MILLER           1300
        13 ADAMS            1100
        12 SCOTT            3000
        11 SMITH             800
        10 FORD             3000
```

```
         9  WARD              1250
         8  JAMES              950
         7  TURNER            1500
         6  ALLEN            1600
         5  MARTIN           1250
         4  JONES            2975
         3  CLARK            2450
         2  BLAKE            2850
         1  KING             5000

14 rows selected.

SQL> cl scr

SQL> SELECT ROWNUM, Empno, Ename, Sal
  2  FROM Emp
  3  /

    ROWNUM      EMPNO ENAME            SAL
---------- ---------- ---------- ----------
         1       7839 KING            5000
         2       7698 BLAKE           2850
         3       7782 CLARK           2450
         4       7566 JONES           2975
         5       7654 MARTIN          1250
         6       7499 ALLEN           1600
         7       7844 TURNER          1500
         8       7900 JAMES            950
         9       7521 WARD            1250
        10       7902 FORD            3000
        11       7369 SMITH            800
        12       7788 SCOTT           3000
        13       7876 ADAMS           1100
        14       7934 MILLER          1300

14 rows selected.

SQL> SELECT ROWNUM, Empno, Ename, Sal
  2  FROM Emp
  3  WHERE ROWNUM = 1;

    ROWNUM      EMPNO ENAME            SAL
---------- ---------- ---------- ----------
         1       7839 KING            5000
```

```
SQL> SELECT ROWNUM, Empno, Ename, Sal
  2  FROM Emp
  3  WHERE ROWNUM = 4;

no rows selected

SQL> SELECT ROWNUM, Empno, Ename, Sal
  2  FROM Emp
  3  WHERE ROWNUM < 4;

    ROWNUM      EMPNO ENAME            SAL
---------- ---------- ---------- ----------
         1       7839 KING            5000
         2       7698 BLAKE           2850
         3       7782 CLARK           2450

SQL> SELECT ROWNUM, Empno, Ename, Sal
  2  FROM Emp
  3  WHERE ROWNUM > 4;

no rows selected

SQL> cl scr

SQL> COLUMN SelectGraph FORMAT A16
SQL> SELECT
  2  Ename,
  3  LPAD('*' , ROWNUM, '*') SelectGraph
  4  FROM Emp;

ENAME      SELECTGRAPH
---------- ----------------
KING       *
BLAKE      **
CLARK      ***
JONES      ****
MARTIN     *****
ALLEN      ******
TURNER     *******
JAMES      ********
WARD       *********
FORD       **********
SMITH      ***********
```

```
SCOTT       ************
ADAMS       *************
MILLER      **************

14 rows selected.

SQL> ED
Wrote file afiedt.buf

  1   SELECT
  2   Ename,
  3   LPAD('*' , ROWNUM, '*') SelectGraph,
  4   Sal
  5   FROM Emp
  6* ORDER BY Sal
SQL> /

ENAME       SELECTGRAPH            SAL
----------  ----------------  ----------
SMITH       ***********          800
JAMES       ********             950
ADAMS       *************       1100
WARD        *********          1250
MARTIN      *****              1250
MILLER      **************      1300
TURNER      *******            1500
ALLEN       ******             1600
CLARK       ***                2450
BLAKE       **                 2850
JONES       ****               2975
FORD        **********         3000
SCOTT       ************       3000
KING        *                  5000

14 rows selected.

SQL> COLUMN SelectGraph FORMAT A16
SQL> COLUMN SalGraph FORMAT A20
SQL> SELECT
  2   Ename,
  3   LPAD('*' , ROWNUM, '*' ) SelectGraph,
  4   LPAD('*', Sal/500, '*') SalGraph
  5   FROM Emp;
```

```
ENAME        SELECTGRAPH        SALGRAPH
----------   ----------------   --------------------
KING         *                  * * * * * * * * *
BLAKE        **                 * * * * *
CLARK        ***                * * * *
JONES        ****               * * * * *
MARTIN       *****              * *
ALLEN        ******             * * *
TURNER       *******            * * *
JAMES        ********           *
WARD         *********          * *
FORD         **********         * * * * * *
SMITH        ***********        *
SCOTT        ************       * * * * * *
ADAMS        *************      * *
MILLER       **************     * *

14 rows selected.

SQL> cl scr

SQL> ED
Wrote file afiedt.buf

  1  SELECT
  2  ROWNUM Seqno,
  3  LPAD('*' , ROWNUM, '*') Pattern
  4  FROM Emp
  5* WHERE ROWNUM <= 5
SQL> /

     SEQNO
----------
PATTERN
----------------------------------------------------------------
--------------------------------------------
         1
*

         2
**

         3
***
```

```
        4
****

        5
*****


SQL> COL Pattern FORMAT A10
SQL> R
  1  SELECT
  2  ROWNUM Seqno,
  3  LPAD('*' , ROWNUM, '*') Pattern
  4  FROM Emp
  5* WHERE ROWNUM <= 5

     SEQNO PATTERN
---------- ----------
         1 *
         2 **
         3 ***
         4 ****
         5 *****


SQL> ED
Wrote file afiedt.buf

  1  SELECT
  2  ROWNUM Seqno,
  3  LPAD('*' , ROWNUM, '*') Pattern
  4  FROM Emp
  5  WHERE ROWNUM <= 5
  6* ORDER BY ROWNUM DESC
SQL> /

     SEQNO PATTERN
---------- ----------
         5 *****
         4 ****
         3 ***
         2 **
         1 *


SQL> cl scr
```

```
SQL> ED
Wrote file afiedt.buf

  1   SELECT
  2   ROWNUM Seqno, Ename, Sal
  3   FROM Emp
  4*  ORDER BY Sal
SQL> /

     SEQNO ENAME            SAL
---------- ---------- ----------
        11 SMITH            800
         8 JAMES            950
        13 ADAMS           1100
         9 WARD            1250
         5 MARTIN          1250
        14 MILLER          1300
         7 TURNER          1500
         6 ALLEN           1600
         3 CLARK           2450
         2 BLAKE           2850
         4 JONES           2975
        10 FORD            3000
        12 SCOTT           3000
         1 KING            5000

14 rows selected.

SQL> SELECT ROWNUM, Ename, Sal
  2   FROM Emp
  3   WHERE ROWNUM < 6
  4   ORDER BY Sal DESC;

    ROWNUM ENAME            SAL
---------- ---------- ----------
         1 KING            5000
         4 JONES           2975
         2 BLAKE           2850
         3 CLARK           2450
         5 MARTIN          1250

SQL> ED
Wrote file afiedt.buf
```

```
    1   SELECT ROWNUM, Ename, Sal
    2   FROM
    3    (
    4    SELECT
    5    Ename, Sal
    6    FROM Emp
    7    ORDER BY Sal
    8*   )
SQL> /

       ROWNUM ENAME             SAL
   ---------- ---------- ----------
            1 SMITH             800
            2 JAMES             950
            3 ADAMS            1100
            4 WARD             1250
            5 MARTIN           1250
            6 MILLER           1300
            7 TURNER           1500
            8 ALLEN            1600
            9 CLARK            2450
           10 BLAKE            2850
           11 JONES            2975
           12 FORD             3000
           13 SCOTT            3000
           14 KING             5000

14 rows selected.

SQL> cl scr

SQL> SELECT *
    2   FROM
    3    (
    4    SELECT Ename, Sal, Deptno, Job
    5    FROM Emp
    6    ORDER BY Sal DESC
    7    )
    8   WHERE ROWNUM < 6;

ENAME             SAL     DEPTNO JOB
--------- ---------- ---------- ---------
KING             5000         10 PRESIDENT
```

```
FORD                 3000           20 ANALYST
SCOTT                3000           20 ANALYST
JONES                2975           20 MANAGER
BLAKE                2850           30 MANAGER

SQL> cl scr

SQL> SELECT LEVEL, ROWNUM, Ename, Sal
  2  FROM Emp
  3  WHERE ROWNUM < 6
  4  START WITH Ename = 'KING'
  5  CONNECT BY PRIOR Empno = MGR
  6  ORDER BY Sal DESC;

     LEVEL     ROWNUM ENAME             SAL
---------- ---------- ---------- ----------
         1          1 KING             5000
         3          3 SCOTT            3000
         3          5 FORD             3000
         2          2 JONES            2975
         4          4 ADAMS            1100

SQL> cl scr

SQL> SELECT E1.*, E1.Sal * 12 AnnSal
  2  FROM
  3   (
  4   SELECT Ename, Sal, Deptno, Job
  5   FROM Emp
  6   ORDER BY Sal DESC
  7   ) E1
  8  WHERE ROWNUM < 6;

ENAME             SAL DEPTNO JOB           ANNSAL
---------- ---------- ---------- --------- ----------
KING             5000         10 PRESIDENT      60000
FORD             3000         20 ANALYST        36000
SCOTT            3000         20 ANALYST        36000
JONES            2975         20 MANAGER        35700
BLAKE            2850         30 MANAGER        34200

SQL> cl scr

SQL> SELECT ROWNUM, E1.*
```

```
2    FROM
3    (
4    SELECT ROWNUM, Ename, Sal, Deptno, Job
5    FROM Emp
6    ORDER BY Sal DESC
7    ) E1
8    WHERE ROWNUM < 6;

    ROWNUM      ROWNUM ENAME              SAL     DEPTNO JOB
---------- ----------- ---------- ---------- ---------- ----------
         1           1 KING             5000         10 PRESIDENT
         2          10 FORD             3000         20 ANALYST
         3          12 SCOTT            3000         20 ANALYST
         4           4 JONES            2975         20 MANAGER
         5           2 BLAKE            2850         30 MANAGER

SQL> SPOOL OFF
```